
KNOX COUNTY

(Knox County Water Service Area Map)

- Estimated 1999 population of 31,400--65% on public water
- Estimated 2020 population of 34,800--83% on public water
- 355 miles of water lines, with plans for 320 additional miles
- Estimated funding needs for public water 2000-2005-none
- Estimated funding needs for public water 2006-2020-\$23,150,000

Knox County had an estimated population of 31,443 (12,497 households) in 1999 with a projected population of 34,776 (15,081 households) in 2020. Public water is provided to about 65 percent of the county's residents. In areas of the county not served by public water, about 95 percent of the households rely on private domestic wells and 5 percent of the households rely on other sources. About 2,730 customers will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
KNOX								-
East Knox W/D	48	717	2,500				1,600	4,100
Dewitt W/D	130	669	7,500				2,000	9,500
Laurel Co. W/D #2	6.5	45	320				230	550
Barbourville	137	1,300	7,000				2,000	9,000
Total	321.5	2,731	17,320				5,830	23,150

PUBLIC WATER SYSTEMS

Knox County has 3 public water systems: 1 municipal, Barbourville Utility Commission; 2 water districts, Dewitt Water District and East Knox County Water District. The county is also served by Corbin Utilities Commission and Laurel Water District II.

BARBOURVILLE WATER & ELECTRIC

PWSID: 0610016
System Type: COMMUNITY
Owner Type: MUNICIPAL
Surface Source: LAUREL LAKE
Purchase Source:
Well Source:
Sells Water to: EAST KNOX WATER DISTRICT
Treatment Plant Capacity (MGD): 4.00

WATER SERVICE AREAS

KNOX COUNTY

Kentucky

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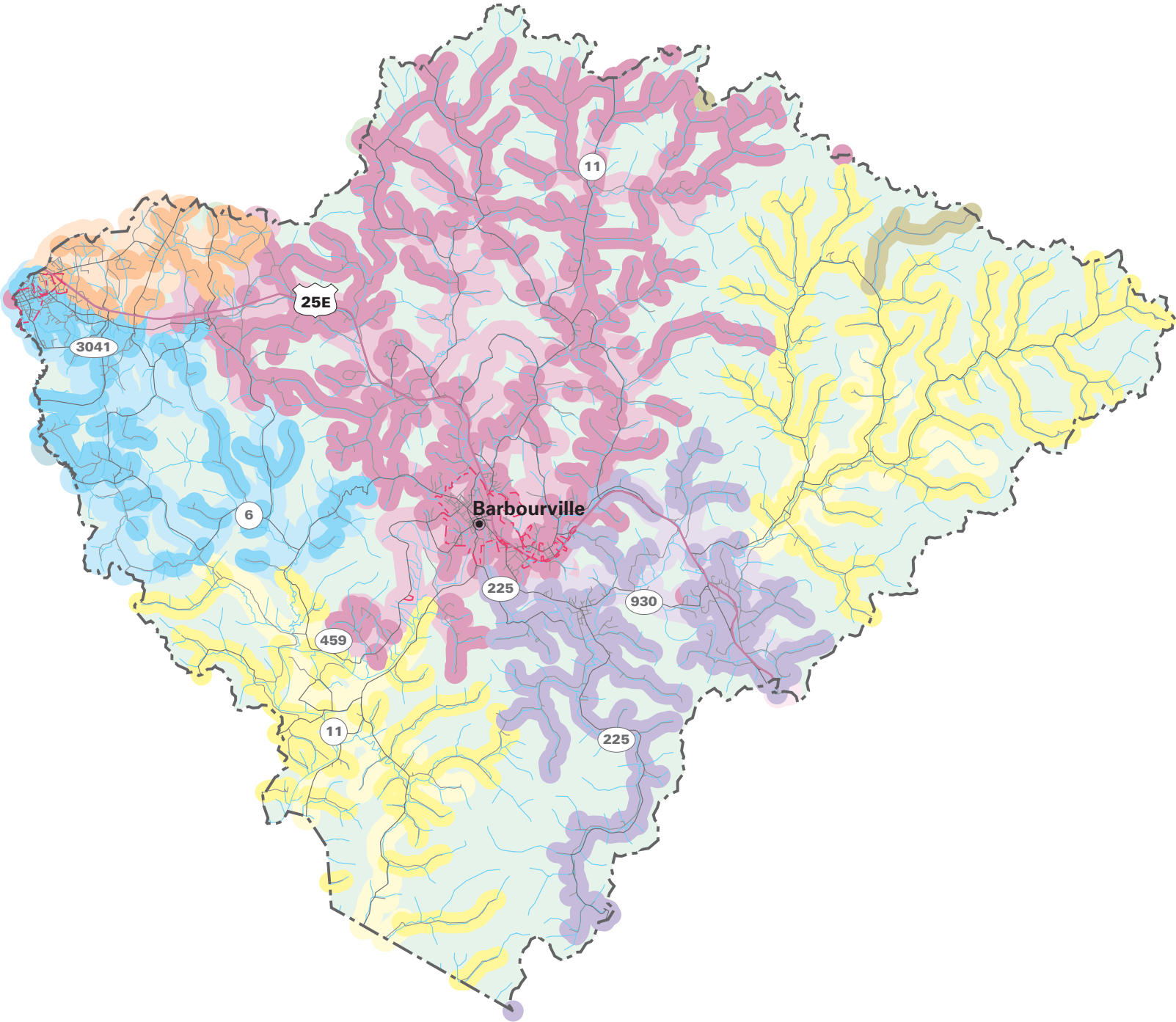
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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		WHITLEY COUNTY WATER DISTRICT #1
		PINEVILLE WATER SYSTEM
		MANCHESTER WATER WORKS
		LAUREL COUNTY WATER DISTRICT #2
		EAST LAUREL WATER DISTRICT
		EAST KNOX WATER DISTRICT
		DEWITT WATER DISTRICT
		CORBIN UTILITIES COMMISSION
		BARBOURVILLE WATER & ELECTRIC

Percent Daily Average Production:.....	34.00
Total Tank Storage Capacity (gallons):	3,160,000.00
Total Service Connections:	5,000.00
Number of Employees:.....	10.00
Treatment Operator Class:	2D
Distribution Operator Class:.....	4A
Customer Rate for 1,000 Gallons:.....	5.00
O/M costs 1997:.....	Not available
O/M costs per Service Connection:	Not available
Net Revenue 1997:	Not available
Total Water Produced 1997 (gallons):.....	Not available
Water Sold 1997 (gallons):.....	Not available
Unaccounted-for Water 1997 (%):	Not available

Barbourville Utility commission gets its water from Laurel Lake in Laurel County and nearby Cumberland River, and according to the Knox County Water Supply Plan this system has an adequate supply of raw water to support any future needs. This system currently services 4,285 residential and 514 commercial customers. Additionally, this system sells water to East Knox County Water District. Barbourville Utility Commission has a plant that has a production capacity of 4 million gallons per day. On an average day the plant produces approximately 1.5 million gallons of potable water or about 37% of its design capacity. The total storage capacity for this system is 3,160,000 gallons of water in 9 water tanks located throughout the county and approximately 909,000 gallons of water in their clear well. \$5.00 is the amount paid for the base usage of 1,000 gallons.

DEWITT WATER DISTRICT

PWSID:	0610791
System Type:.....	COMMUNITY
Owner Type:	WATER DISTRICT
Surface Source:	
Purchase Source:	EAST KNOX COUNTY WATER DISTRICT
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):.....	0.00
Percent Daily Average Production:.....	0.00
Total Tank Storage Capacity (gallons):	200,000.00
Total Service Connections:	534.00
Number of Employees:.....	9.00
Treatment Operator Class:	2D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:.....	4.91
O/M costs 1997:.....	96,797.00
O/M costs per Service Connection:	186.51
Net Revenue 1997:	31,221.00
Total Water Produced 1997 (gallons):.....	0.00

Water Sold 1997 (gallons):	28,828,000.00
Unaccounted-for Water 1997 (%):	24.90

Dewitt Water District acquires water from a trade agreement with East Knox County Water District and City Utilities Commission of Corbin, Kentucky. This water district is a distributor and does not treat raw water. According to the Knox County and Whitley County Water Supply Plans the East Knox County Water District Source and City Utilities Commission of Corbin, Kentucky both have an adequate source to provide potable water for future needs. This water system services 528 residential, 2 commercial and 40 other customers. There are 437 customers in Knox County and there are 97 customers in Whitley County. The storage capacity for this plant is 200,000 gallons of water for their one tank.

EAST KNOX WATER DISTRICT

PWSID:	0610110
System Type:	COMMUNITY
Owner Type:	WATER DISTRICT
Surface Source:	CUMBERLAND RIVER
Purchase Source:	BARBOURVILLE UTILITY COMMISSION
Well Source:	
Sells Water to:	DEWITT WATER DISTRICT
Treatment Plant Capacity (MGD):	0.37
Percent Daily Average Production:	86.00
Total Tank Storage Capacity (gallons):	250,000.00
Total Service Connections:	1,113.00
Number of Employees:	9.00
Treatment Operator Class:	2D
Distribution Operator Class:	2A
Customer Rate for 1,000 Gallons:	5.12
O/M costs 1997:	413,564.00
O/M costs per Service Connection:	375.63
Net Revenue 1997:	95,956.00
Total Water Produced 1997 (gallons):	117,821,800.00
Water Sold 1997 (gallons):	85,935,500.00
Unaccounted-for Water 1997 (%):	24.25

East Knox County Water District gets its water from the nearby Cumberland River, and according to the Knox County Water Supply Plan this district has an adequate supply of raw water to support any future needs. This district also purchases water from Barbourville Utility Commission through a master meter owned by Barbourville Utility Commission. This system currently services 1,088 residential, 18 commercial and 7 other customers. Additionally, this system sells water to the Dewitt Water District. Barbourville Utility Commission has a plant that has a production capacity of 368,000 gallons per day. On an

average day the plant produces approximately 325,000 gallons of potable water or about 88% of its design capacity. This district has the storage capacity of 250,000 gallons of water for their two tanks located in the county and 60,000 gallons of water for their clear well capacity.

PRIVATE DOMESTIC SYSTEMS

About 10,800 residents of Knox County rely on private domestic water supplies: 10,300 on wells and 500 on other sources.

Most wells in valley bottoms produce adequate amounts of water for domestic supply. Fewer than half of the wells drilled on hillsides are adequate for a domestic supply. Wells on hilltops and ridges yield smaller quantities of water.

Most of the water from drilled wells is extremely hard and contains noticeable amounts of iron. Salty water may be found in wells drilled into bedrock less than 100 feet below the level of the principal valley bottoms. Water quality and quantity is slightly better in the far eastern end of the county with the potential for drilled wells more than 200 feet deep in valleys may yield enough water for small municipal or industrial supplies.

A few springs supply sufficient quantities of water for domestic use. Almost all springs yield less than 5gpm.
